aeromet

SEASONAL PROGRESS REPORT NO. 6
for the period
June, July and August, 1977

to

ENVIRONMENTAL PROTECTION AGENCY
REGION VIII
1860 Lincoln St., Suite 900
Denver, CO 80203

Contract No. 68-01-1946

aeromet inc.

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by

Aeromet, Inc.
P.O. Box 45447
Tulsa, OK 74145

1.0 INTRODUCTION

Low level temperature and wind data were collected for the summer season of June, July and August, 1977 at the U-a/U-b Tract 5 miles south of Bonanza, Utah. Data collection terminated on 30 June at Casper, Wyoming; the Colorado C-b Tract 25 miles west of Rio Blanco, Colorado; Craig, Colorado; Escalante and Hanksville, Utah; and Rock Springs, Wyoming. Data collection will continue at the U-a/U-b Tract through 31 January 1978.

The data were collected using a 30 gm helium filled pilot balloon with a temperature sonde attached, a single theodolite and a TSR-2 receiver/recorder twice a day every other day. The observations were scheduled ½ hour after sunrise and at 1400L.

The pilot balloon had an ascent rate of 500 ft/min and was tracked by a single theodolite for 12 minutes with the azimuth and elevation angles recorded every 30 seconds on a cassette tape recorder. The tape was transcribed to a pilot balloon form after the observation.

The temperature sonde operated at 403 MHz and the signal was received by a ground plane antenna at least 16 ft AGL which was attached to the Aeromet, Inc. TSR-2 receiver/recorder. The TSR-2 receiver has a built-in Rustrak strip chart recorder and the temperature was recorded within the range from -50°C to +50°C. A baseline temperature calibration was performed with each T-Sonde by the adjustment of the recorded temperature to match the thermometer measured temperature next to the transmitting sonde. Once the calibration check was finished the balloon was released with the sonde attached and the temperature was recorded for at least 20 minutes. At the completion of each observation the data were mailed to Aeromet, Inc.

2.0 DATA SUMMARY

2.1 Mixing Layer Height

The average mixing layer height was computed for the morning and afternoon based on the morning and 1400L temperature soundings. The balloon release ½ hour after sunrise is near enough to the minimum temperature to assume the correctness of the calculated mixing layer heights. The afternoon balloon release is generally not at the time of maximum heating and the user of the mixing layer height data must be aware that minor changes in the calculated values can be expected. Without equipping the field sites with minimum/maximum thermometers the extrapolation of the afternoon data cannot be justified in establishing a data base for statistical analysis. The approximation of the afternoon maximum temperature would be a "calculated guess" for there are: 1) local effects which are to be determined and would be filtered out with extrapolation, 2) mountain effects which alter the lower 1500m (e.g. downslope effects), and 3) meteorological effects which can alter the expected change in the sounding (e.g. advection, moisture, etc.).

It is felt that to better define the mixing layer height a variety of "heat island" effects should be viewed. The rigorous method would be to define 15 "heat island" effects ranging from 0 to 14°C and let the user decide which would best serve his needs. However, for this analysis 0°, +5° and +10° "heat island" effects were considered.

A summary of the average mixing layer heights calculated with the 0°, +5° and +10° "heat island" effects at the U-a/U-b Tract for the summer season of June, July, and August 1977 are included in the report. The percent of occurrence of the average height within 250m increments above ground level is given in tabular form. The total number of soundings included in the sample populations are listed in the table.

2.2 Stability and Inversion Classification

The temperature and wind data were edited to remove data felt to cause anomalous results in the stability and inversion classification schemes. Only the stations listed prior to the table classifying the inversions were used in the calculations.

The temperature data are processed to produce a seasonal summary of inversion layers and lapse rates within the inversions and from the inversion base to the surface by means of the Holzworth classification scheme for inversions (Holzworth, G. C., 1974: "Climatological Data on Atmospheric Stability in the United States" paper presented at the American Meteorological Society Symposium on Atmospheric Diffusion and Air Pollution, September 9-13, 1974, Santa Barbara, California.)

The temperature and wind data are processed together to produce an average bivariate frequency distribution of wind direction versus wind speed represented in the 500m layer adjacent to the ground for the summer season. The distribution is presented by the six Pasquill stability classes (A-F) and a summary independent of stability. If the $\Delta T/100m$ criterion is met but the wind speed criterion is not met, then the wind data are checked against the criterion for the next stability class,

STABILITY CLASS	ΔT (°C/100m)	WIND SPEED ($m\ s^{-1}$)
A	<-1.9	≤ 2
B	-1.9 - -1.7	≤ 5
C	-1.7 - -1.5	≤ 6
D	-1.5 - -0.5	ALL SPEEDS
E	-0.5 - 1.5	≤ 5
F	>1.5	≤ 3

always cascading to the D stability class. Once the wind speed criterion is met the data are classified under the new stability class even though now the lapse rate exceeds the class criterion. For example, if the $\Delta T/100m$ value is 1.7 and the wind speed is 7 $m\ s^{-1}$, the lapse rate criterion is met for the stability class F, however the wind speed criterion is exceeded. The wind speed is greater than the 5 $m\ s^{-1}$ maximum limit for class E but falls within the criterion of class D, which includes all wind speeds. As a result the observational data with a ΔT value of 1.7°C/100m and a wind speed value of 7 $m\ s^{-1}$ are classified under stability class D, not class F.

The data are also punched on computer cards in a format compatible with the STAR PROGRAM of the National Climatic Center, NOAA, U.S. Department of Commerce. A description of the punched output can be found in the Monthly Progress Reports.

AVERAGE MIXING LAYER HEIGHT
Utah U-a/U-b Tract
SEASONAL: June, July, August 1977

MIXING LAYER HEIGHT (Height in meters)	PERCENT OF OCCURRENCE					
	MORNING			AFTERNOON		
	0°	+5°	+10°	0°	+5°	+10°
surface	93.0			5.4		
1 - 250m	7.0	59.5		13.6		
251 - 500m		21.4	17.1	5.4		
501 - 750m		7.1	24.4	10.8	5.4	
751 - 1000m		4.8	24.4	10.8	8.1	
1001 - 1250m		2.4	9.8	21.6	2.7	
1251 - 1500m		4.8	7.3	2.7	10.8	5.4
1501 - 1750m				2.7	10.8	5.4
1751 - 2000m			2.4	5.4	5.4	
>2000m			14.6	18.9	40.5	56.8
None defined				2.7	16.2	32.4
TOTAL NUMBER	43	42	41	37	37	37

UTAH UAUB ELEV 1585 METERS SOUNDING ID 4798

DATE 06/02/77 TIME 04:48MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

INV BASE METERS AGL	INV TOP METERS AGL	INV DT/DZ (DEG C)/100M	DT/DZ BELOW INV (DEG C)/100M
0.	457.	1.01	0.0

UTAH UAUB ELEV 1585 METERS SOUNDING ID 4799

DATE 06/02/77 TIME 13:50MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

THERE ARE NO INVERSION BASES WITHIN 1500M OF THE SFC

LAYER BASE METERS AGL	LAYER TOP METERS AGL	DT/DZ (DEG C)/100M
0.	100.	-1.20
100.	250.	-0.91
250.	500.	-1.13
500.	750.	-1.06
750.	1000.	-0.75
1000.	1500.	-1.12

UTAH UAUB ELEV 1585 METERS SOUNDING ID 4804

DATE 06/06/77 TIME 04:48MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

INV BASE METERS AGL	INV TOP METERS AGL	INV DT/DZ (DEG C)/100M	DT/DZ BELOW INV (DEG C)/100M
0.	381.	1.87	0.0

UTAH UAUB ELEV 1585 METERS SOUNDING ID 4805

DATE 06/06/77 TIME 13:50MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

THERE ARE NO INVERSION BASES WITHIN 1500M OF THE SFC

LAYER BASE METERS AGL	LAYER TOP METERS AGL	DT/DZ (DEG C)/100M
0.	100.	-2.80
100.	250.	-0.80
250.	500.	-1.05
500.	750.	-0.93
750.	1000.	-1.06
1000.	1500.	-0.96

UTAH UAUB ELEV 1585 METERS SOUNDING ID 4800

DATE 06/06/77 TIME 04:48MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

INV BASE METERS AGL	INV TOP METERS AGL	INV DT/DZ (DEG C)/100M	DT/DZ BELOW INV (DEG C)/100M
0.	305.	1.37	0.0

UTAH UAUB ELEV 1585 METERS SOUNDING ID 4807

DATE 06/08/77 TIME 13:50MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

INV BASE METERS AGL	INV TOP METERS AGL	INV DT/DZ (DEG C)/100M	DT/DZ BELOW INV (DEG C)/100M
0.	76.	0.47	0.0

UTAH UAUB ELEV 1585 METERS SOUNDING ID 4808

DATE 06/10/77 TIME 04:47MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

INV BASE METERS AGL	INV TOP METERS AGL	INV DT/DZ (DEG C)/100M	DT/DZ BELOW INV (DEG C)/100M
0.	229.	0.56	0.0

UTAH UAUB ELEV 1585 METERS SOUNDING ID 4789

DATE 06/10/77 TIME 13:40MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

INV BASE METERS AGL	INV TOP METERS AGL	INV DT/DZ (DEG C)/100M	DT/DZ BELOW INV (DEG C)/100M
76.	134.	0.0	-2.35

UTAH UAUB ELEV 1585 METERS SOUNDING ID 4811

DATE 06/12/77 TIME 04:46MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

INV BASE METERS AGL	INV TOP METERS AGL	INV DT/DZ (DEG C)/100M	DT/DZ BELOW INV (DEG C)/100M
0.	343.	1.34	0.0

UTAH UAUB ELEV 1585 METERS SOUNDING ID 4791

DATE 06/12/77 TIME 13:50MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

THERE ARE NO INVERSION BASES WITHIN 1500M OF THE SFC

LAYER BASE METERS AGL	LAYER TOP METERS AGL	DT/DZ (DEG C)/100M
0.	100.	-1.74
100.	250.	-1.10
250.	500.	-0.94
500.	750.	-1.09
750.	1000.	-0.94
1000.	1500.	-1.01

UTAH UAUB ELEV 1585 METERS SOUNDING ID 4796

DATE 06/14/77 TIME 04:50MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

INV BASE METERS AGL	INV TOP METERS AGL	INV DT/DZ (DEG C)/100M	DT/DZ BELOW INV (DEG C)/100M
0.	410.	1.69	0.0

UTAH UAUB ELEV 1585 METERS SOUNDING ID 4797

DATE 06/14/77 TIME 13:50MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

INV BASE METERS AGL	INV TOP METERS AGL	INV DT/DZ (DEG C)/100M	DT/DZ BELOW INV (DEG C)/100M
311.	540.	0.19	-0.85

UTAH UAUB ELEV 1585 METERS SOUNDING ID 4794

DATE 06/16/77 TIME 04:46MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

INV BASE METERS AGL	INV TOP METERS AGL	INV DT/DZ (DEG C)/100M	DT/DZ BELOW INV (DEG C)/100M
0.	303.	1.01	0.0

UTAH UAUB ELEV 1585 METERS SOUNDING ID 4790

DATE 06/16/77 TIME 04:46MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

INV BASE METERS AGL	INV TOP METERS AGL	INV DT/DZ (DEG C)/100M	DT/DZ BELOW INV (DEG C)/100M
0.	343.	1.01	0.0

UTAH UAUB ELEV 1585 METERS SOUNDING ID 4790

DATE 06/16/77 TIME 13:50MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

INV BASE METERS AGL	INV TOP METERS AGL	INV DT/DZ (DEG C)/100M	DT/DZ BELOW INV (DEG C)/100M
626.	665.	0.92	-1.18

UTAH UAUB ELEV 1585 METERS SOUNDING ID 4795

DATE 06/18/77 TIME 04:50MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

INV BASE METERS AGL	INV TOP METERS AGL	INV DT/DZ (DEG C)/100M	DT/DZ BELOW INV (DEG C)/100M
0.	191.	1.38	0.0

UTAH UAUB ELEV 1585 METERS SOUNDING ID 4877

DATE 06/18/77 TIME 13:50MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

INV BASE METERS AGL	INV TOP METERS AGL	INV DT/DZ (DEG C)/100M	DT/DZ BELOW INV (DEG C)/100M
223.	261.	0.0	-1.53

UTAH UAUB ELEV 1585 METERS SOUNDING ID 4878

DATE 06/20/77 TIME 04:50MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

INV BASE METERS AGL	INV TOP METERS AGL	INV DT/DZ (DEG C)/100M	DT/DZ BELOW INV (DEG C)/100M
0.	152.	2.96	0.0

UTAH UAUB ELEV 1585 METERS SOUNDING ID 4881

DATE 06/22/77 TIME 05:01MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

INV BASE METERS AGL	INV TOP METERS AGL	INV DT/DZ (DEG C)/100M	DT/DZ BELOW INV (DEG C)/100M
0.	457.	0.80	0.0

UTAH UAUB ELEV 1585 METERS SOUNDING ID 4882

DATE 06/24/77 TIME 04:48MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

INV BASE METERS AGL	INV TOP METERS AGL	INV DT/DZ (DEG C)/100M	DT/DZ BELOW INV (DEG C)/100M
0.	495.	0.92	0.0

UTAH UAUB ELEV 1585 METERS SOUNDING ID 4884

UTAH UAUR FLEV 1585 METERS SOUNDING ID 4864

DATE 06/24/77 TIME 14:02MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

INV BASE METERS AGL	INV TOP METERS AGL	INV DT/DZ (DEG C)/100M	DT/DZ BELOW INV (DEG C)/100M
288.	328.	0.0	-1.34

UTAH UAUR FLEV 1585 METERS SOUNDING ID 4870

DATE 06/24/77 TIME 04:49MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

INV BASE METERS AGL	INV TOP METERS AGL	INV DT/DZ (DEG C)/100M	DT/DZ BELOW INV (DEG C)/100M
152.	229.	0.0	-0.35

UTAH UAUR FLEV 1585 METERS SOUNDING ID 4860

DATE 06/26/77 TIME 14:02MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

THERE ARE NO INVERSION BASES WITHIN 1500M OF THE SFC

LAYER BASE METERS AGL	LAYER TOP METERS AGL	DT/DZ (DEG C)/100M
0.	100.	-2.69
100.	250.	-0.74
250.	500.	-0.87
500.	750.	-0.84
750.	1000.	-0.75
1000.	1500.	-0.69

UTAH UAUR FLEV 1585 METERS SOUNDING ID 4871

DATE 06/28/77 TIME 04:50MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

INV BASE METERS AGL	INV TOP METERS AGL	INV DT/DZ (DEG C)/100M	DT/DZ BELOW INV (DEG C)/100M
0.	191.	1.52	0.0

UTAH UAUR FLEV 1585 METERS SOUNDING ID 4866

DATE 06/28/77 TIME 13:00MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

INV BASE METERS AGL	INV TOP METERS AGL	INV DT/DZ (DEG C)/100M	DT/DZ BELOW INV (DEG C)/100M
792.	830.	0.45	-1.08

UTAH UAUR FLEV 1585 METERS SOUNDING ID 4867

DATE 06/30/77 TIME 04:50MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

INV BASE METERS AGL	INV TOP METERS AGL	INV DT/DZ (DEG C)/100M	DT/DZ BELOW INV (DEG C)/100M
0.	267.	1.57	0.0

UTAH UAUR FLEV 1585 METERS SOUNDING ID 4876

DATE 07/02/77 TIME 04:50MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

INV BASE METERS AGL	INV TOP METERS AGL	INV DT/DZ (DEG C)/100M	DT/DZ BELOW INV (DEG C)/100M

UTAH UAUB ELEV 1585 METERS SOUNDING ID 4876

DATE 07/02/77 TIME 04:54MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

INV BASE METERS AGL	INV TOP METERS AGL	INV DT/DZ (DEG C)/100M	DT/DZ BELOW INV (DEG C)/100M
0.	110.	1.27	0.0

UTAH UAUB ELEV 1585 METERS SOUNDING ID 4862

DATE 07/02/77 TIME 14:11MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

THERE ARE NO INVERSION BASES WITHIN 1500M OF THE SFC

LAYER BASE METERS AGL	LAYER TOP METERS AGL	DT/DZ (DEG C)/100M
0.	100.	-3.46
100.	250.	-0.72
250.	500.	-0.80
500.	750.	-0.73
750.	1000.	-0.67
1000.	1500.	-0.74

UTAH UAUB ELEV 1585 METERS SOUNDING ID 4863

DATE 07/04/77 TIME 04:52MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

INV BASE METERS AGL	INV TOP METERS AGL	INV DT/DZ (DEG C)/100M	DT/DZ BELOW INV (DEG C)/100M
0.	38.	0.0	0.0

UTAH UAUB ELEV 1585 METERS SOUNDING ID 4861

DATE 07/06/77 TIME 04:50MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

INV BASE METERS AGL	INV TOP METERS AGL	INV DT/DZ (DEG C)/100M	DT/DZ BELOW INV (DEG C)/100M
0.	686.	0.70	0.0

UTAH UAUB ELEV 1585 METERS SOUNDING ID 4868

DATE 07/06/77 TIME 14:00MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

THERE ARE NO INVERSION BASES WITHIN 1500M OF THE SFC

LAYER BASE METERS AGL	LAYER TOP METERS AGL	DT/DZ (DEG C)/100M
0.	100.	-1.84
100.	250.	-0.76
250.	500.	-1.09
500.	750.	-0.90
750.	1000.	-1.10
1000.	1500.	-1.00

UTAH UAUB ELEV 1585 METERS SOUNDING ID 4878

DATE 07/10/77 TIME 05:58MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

THERE ARE INSUFFICIENT DATA WITHIN 2000M OF THE SFC

UTAH UAUB ELEV 1585 METERS SOUNDING ID 4883

DATE 07/10/77 TIME 13:58MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

INV BASE	INV TOP	INV DT/DZ	DT/DZ BELOW INV

THERE ARE INSUFFICIENT DATA WITHIN 2000M OF THE SFC

UTAH UAIR ELEV 1585 METERS SOUNDING ID 4883

DATE 07/10/77 TIME 13:58MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

INV BASE METERS AGL	INV TOP METERS AGL	INV DT/DZ (DEG C)/100M	DT/DZ BELOW INV (DEG C)/100M
1181.	1222.	0.0	-0.98

UTAH UAIR ELEV 1585 METERS SOUNDING ID 4871

DATE 07/12/77 TIME 04:57MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

INV BASE METERS AGL	INV TOP METERS AGL	INV DT/DZ (DEG C)/100M	DT/DZ BELOW INV (DEG C)/100M
0.	457.	1.46	0.0

UTAH UAIR ELEV 1585 METERS SOUNDING ID 4872

DATE 07/12/77 TIME 13:50MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

INV BASE METERS AGL	INV TOP METERS AGL	INV DT/DZ (DEG C)/100M	DT/DZ BELOW INV (DEG C)/100M
38.	76.	0.0	-5.66

UTAH UAIR ELEV 1585 METERS SOUNDING ID 4873

DATE 07/14/77 TIME 05:00MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

INV BASE METERS AGL	INV TOP METERS AGL	INV DT/DZ (DEG C)/100M	DT/DZ BELOW INV (DEG C)/100M
0.	267.	1.77	0.0

UTAH UAIR ELEV 1585 METERS SOUNDING ID 4869

DATE 07/14/77 TIME 13:52MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

INV BASE METERS AGL	INV TOP METERS AGL	INV DT/DZ (DEG C)/100M	DT/DZ BELOW INV (DEG C)/100M
274.	426.	0.0	-0.96

UTAH UAIR ELEV 1585 METERS SOUNDING ID 5117

DATE 07/16/77 TIME 04:59MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

INV BASE METERS AGL	INV TOP METERS AGL	INV DT/DZ (DEG C)/100M	DT/DZ BELOW INV (DEG C)/100M
0.	343.	1.77	0.0

UTAH UAIR ELEV 1585 METERS SOUNDING ID 5124

DATE 07/16/77 TIME 13:54MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

INV BASE METERS AGL	INV TOP METERS AGL	INV DT/DZ (DEG C)/100M	DT/DZ BELOW INV (DEG C)/100M
244.	282.	0.0	-1.45

UTAH UAUR ELEV 1585 METERS SOUNDING ID 5122

DATE 07/18/77 TIME 05:01MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

INV BASE METERS AGL	INV TOP METERS AGL	INV DT/DZ (DEG C)/100M	DT/DZ BELOW INV (DEG C)/100M
0.	152.	1.52	0.0

UTAH UAUR ELEV 1585 METERS SOUNDING ID 5120

DATE 07/20/77 TIME 05:00MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

INV BASE METERS AGL	INV TOP METERS AGL	INV DT/DZ (DEG C)/100M	DT/DZ BELOW INV (DEG C)/100M
0.	76.	0.0	0.0

UTAH UAUR ELEV 1585 METERS SOUNDING ID 5118

DATE 07/20/77 TIME 13:50MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

INV BASE METERS AGL	INV TOP METERS AGL	INV DT/DZ (DEG C)/100M	DT/DZ BELOW INV (DEG C)/100M
1106.	1144.	0.0	-0.96

UTAH UAUR ELEV 1585 METERS SOUNDING ID 5123

DATE 07/22/77 TIME 05:00MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

INV BASE METERS AGL	INV TOP METERS AGL	INV DT/DZ (DEG C)/100M	DT/DZ BELOW INV (DEG C)/100M
305.	343.	0.0	-0.65

UTAH UAUR ELEV 1585 METERS SOUNDING ID 5121

DATE 07/22/77 TIME 13:50MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

INV BASE METERS AGL	INV TOP METERS AGL	INV DT/DZ (DEG C)/100M	DT/DZ BELOW INV (DEG C)/100M
115.	153.	0.0	-1.34

UTAH UAUR ELEV 1585 METERS SOUNDING ID 5119

DATE 07/20/77 TIME 05:05MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

INV BASE METERS AGL	INV TOP METERS AGL	INV DT/DZ (DEG C)/100M	DT/DZ BELOW INV (DEG C)/100M
0.	152.	0.0	0.0

UTAH UAUR ELEV 1585 METERS SOUNDING ID 5112

DATE 07/20/77 TIME 13:50MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

INV BASE METERS AGL	INV TOP METERS AGL	INV DT/DZ (DEG C)/100M	DT/DZ BELOW INV (DEG C)/100M
38.	76.	0.0	-0.46

UTAH UAUR ELEV 1585 METERS SOUNDING ID 5114

UTAH UAUB ELEV 1585 METERS SOUNDING ID 5110

DATE 07/26/77 TIME 05:06MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

INV BASE METERS AGL	INV TOP METERS AGL	INV DT/DZ (DEG C)/100M	DT/DZ BELOW INV (DEG C)/100M
0.	381.	0.95	0.0

UTAH UAUB ELEV 1585 METERS SOUNDING ID 5116

DATE 07/26/77 TIME 13:50MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

THERE ARE NO INVERSION BASES WITHIN 1500M OF THE SFC

LAYER BASE METERS AGL	LAYER TOP METERS AGL	DT/DZ (DEG C)/100M
0.	100.	-2.36
100.	250.	-0.66
250.	500.	-1.05
500.	750.	-0.98
750.	1000.	-0.98
1000.	1500.	-1.06

UTAH UAUB ELEV 1585 METERS SOUNDING ID 5109

DATE 07/28/77 TIME 05:09MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

INV BASE METERS AGL	INV TOP METERS AGL	INV DT/DZ (DEG C)/100M	DT/DZ BELOW INV (DEG C)/100M
0.	190.	0.82	0.0

UTAH UAUB ELEV 1585 METERS SOUNDING ID 5111

DATE 07/28/77 TIME 13:50MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

INV BASE METERS AGL	INV TOP METERS AGL	INV DT/DZ (DEG C)/100M	DT/DZ BELOW INV (DEG C)/100M
608.	646.	0.92	-1.08

UTAH UAUB ELEV 1585 METERS SOUNDING ID 5113

DATE 07/30/77 TIME 13:50MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

THERE ARE NO INVERSION BASES WITHIN 1500M OF THE SFC

LAYER BASE METERS AGL	LAYER TOP METERS AGL	DT/DZ (DEG C)/100M
0.	100.	-2.82
100.	250.	-0.69
250.	500.	-0.87
500.	750.	-1.02
750.	1000.	-1.05
1000.	1500.	-1.03

UTAH UAUB ELEV 1585 METERS SOUNDING ID 5115

DATE 08/01/77 TIME 05:16MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

INV BASE METERS AGL	INV TOP METERS AGL	INV DT/DZ (DEG C)/100M	DT/DZ BELOW INV (DEG C)/100M
0.	571.	0.95	0.0

UTAH UAUB ELEV 1585 METERS SOUNDING ID 5106

UTAH UAUB ELEV 1585 METERS SOUNDING ID 5106

DATE 08/01/77 TIME 13:50MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

THERE ARE NO INVERSION BASES WITHIN 1500M OF THE SFC

LAYER BASE METERS AGL	LAYER TOP METERS AGL	DT/DZ (DEG C)/100M
0.	100.	-1.94
100.	250.	-0.83
250.	500.	-0.97
500.	750.	-1.00
750.	1000.	-0.92
1000.	1500.	-0.41

UTAH UAUB ELEV 1585 METERS SOUNDING ID 5104

DATE 08/03/77 TIME 05:12MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

INV BASE METERS AGL	INV TOP METERS AGL	INV DT/DZ (DEG C)/100M	DT/DZ BELOW INV (DEG C)/100M
0.	610.	0.89	0.0

UTAH UAUB ELEV 1585 METERS SOUNDING ID 5108

DATE 08/03/77 TIME 13:50MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

INV BASE METERS AGL	INV TOP METERS AGL	INV DT/DZ (DEG C)/100M	DT/DZ BELOW INV (DEG C)/100M
989.	1217.	0.0	-1.04

UTAH UAUB ELEV 1585 METERS SOUNDING ID 5107

DATE 08/05/77 TIME 05:19MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

INV BASE METERS AGL	INV TOP METERS AGL	INV DT/DZ (DEG C)/100M	DT/DZ BELOW INV (DEG C)/100M
724.	876.	0.52	-0.55

UTAH UAUB ELEV 1585 METERS SOUNDING ID 5105

DATE 08/05/77 TIME 12:50MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

INV BASE METERS AGL	INV TOP METERS AGL	INV DT/DZ (DEG C)/100M	DT/DZ BELOW INV (DEG C)/100M
1012.	1164.	0.59	-1.05

UTAH UAUB ELEV 1585 METERS SOUNDING ID 5103

DATE 08/07/77 TIME 05:20MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

INV BASE METERS AGL	INV TOP METERS AGL	INV DT/DZ (DEG C)/100M	DT/DZ BELOW INV (DEG C)/100M
0.	571.	0.82	0.0

UTAH UAUB ELEV 1585 METERS SOUNDING ID 5101

DATE 08/07/77 TIME 13:50MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

INV BASE METERS AGL	INV TOP METERS AGL	INV DT/DZ (DEG C)/100M	DT/DZ BELOW INV (DEG C)/100M

UTAH UAUB ELEV 1585 METERS SOUNDING ID 5101

DATE 08/07/77 TIME 13:50MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

INV BASE METERS AGL	INV TOP METERS AGL	INV DT/DZ (DEG C)/100M	DT/DZ BELOW INV (DEG C)/100M
110.	229.	0.0	-1.10

UTAH UAUB ELEV 1585 METERS SOUNDING ID 5282

DATE 08/09/77 TIME 05:21MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

INV BASE METERS AGL	INV TOP METERS AGL	INV DT/DZ (DEG C)/100M	DT/DZ BELOW INV (DEG C)/100M
0.	571.	0.91	0.0

UTAH UAUB ELEV 1585 METERS SOUNDING ID 5292

DATE 08/09/77 TIME 13:50MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

INV BASE METERS AGL	INV TOP METERS AGL	INV DT/DZ (DEG C)/100M	DT/DZ BELOW INV (DEG C)/100M
1001.	1344.	0.0	-1.03

UTAH UAUB ELEV 1585 METERS SOUNDING ID 5290

DATE 08/11/77 TIME 05:22MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

INV BASE METERS AGL	INV TOP METERS AGL	INV DT/DZ (DEG C)/100M	DT/DZ BELOW INV (DEG C)/100M
0.	229.	1.19	0.0

UTAH UAUB ELEV 1585 METERS SOUNDING ID 5288

DATE 08/11/77 TIME 13:50MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

INV BASE METERS AGL	INV TOP METERS AGL	INV DT/DZ (DEG C)/100M	DT/DZ BELOW INV (DEG C)/100M
553.	1049.	0.48	-1.06

UTAH UAUB ELEV 1585 METERS SOUNDING ID 5281

DATE 08/13/77 TIME 05:26MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

INV BASE METERS AGL	INV TOP METERS AGL	INV DT/DZ (DEG C)/100M	DT/DZ BELOW INV (DEG C)/100M
0.	419.	0.97	0.0

UTAH UAUB ELEV 1585 METERS SOUNDING ID 5291

DATE 08/13/77 TIME 13:50MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

INV BASE METERS AGL	INV TOP METERS AGL	INV DT/DZ (DEG C)/100M	DT/DZ BELOW INV (DEG C)/100M
440.	478.	0.0	-1.15

UTAH UAUB ELEV 1585 METERS SOUNDING ID 5289

DATE 08/15/77 TIME 05:26MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

UTAH UAUB ELEV 1585 METERS SOUNDING ID 5289

DATE 08/15/77 TIME 05:26MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

INV BASE METERS AGL	INV TOP METERS AGL	INV DT/DZ (DEG C)/100M	DT/DZ BELOW INV (DEG C)/100M
0.	305.	1.18	0.0

UTAH UAUB ELEV 1585 METERS SOUNDING ID 5287

DATE 08/17/77 TIME 05:29MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

INV BASE METERS AGL	INV TOP METERS AGL	INV DT/DZ (DEG C)/100M	DT/DZ BELOW INV (DEG C)/100M
0.	305.	0.56	0.0

UTAH UAUB ELEV 1585 METERS SOUNDING ID 5277

DATE 08/19/77 TIME 05:32MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

INV BASE METERS AGL	INV TOP METERS AGL	INV DT/DZ (DEG C)/100M	DT/DZ BELOW INV (DEG C)/100M
0.	343.	0.53	0.0

UTAH UAUB ELEV 1585 METERS SOUNDING ID 5275

DATE 08/19/77 TIME 13:52MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

THERE ARE NO INVERSION BASES WITHIN 1500M OF THE SFC

LAYER BASE METERS AGL	LAYER TOP METERS AGL	DT/DZ (DEG C)/100M
0.	100.	-2.38
100.	250.	-0.89
250.	500.	-0.99
500.	750.	-1.02
750.	1000.	-0.23
1000.	1500.	-0.24

UTAH UAUB ELEV 1585 METERS SOUNDING ID 5285

DATE 08/21/77 TIME 05:33MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

INV BASE METERS AGL	INV TOP METERS AGL	INV DT/DZ (DEG C)/100M	DT/DZ BELOW INV (DEG C)/100M
0.	343.	0.66	0.0

UTAH UAUB ELEV 1585 METERS SOUNDING ID 5283

DATE 08/21/77 TIME 13:50MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

INV BASE METERS AGL	INV TOP METERS AGL	INV DT/DZ (DEG C)/100M	DT/DZ BELOW INV (DEG C)/100M
644.	759.	0.0	-0.94

UTAH UAUB ELEV 1585 METERS SOUNDING ID 5278

DATE 08/23/77 TIME 05:35MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

INV BASE METERS AGL	INV TOP METERS AGL	INV DT/DZ (DEG C)/100M	DT/DZ BELOW INV (DEG C)/100M

UTAH UAUB ELEV 1585 METERS SOUNDING ID 5278

DATE 08/23/77 TIME 05:35MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

INV BASE METERS AGL	INV TOP METERS AGL	INV DT/DZ (DEG C)/100M	DT/DZ BELOW INV (DEG C)/100M
0.	457.	0.77	0.0

UTAH UAUB ELEV 1585 METERS SOUNDING ID 5286

DATE 08/25/77 TIME 05:36MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

INV BASE METERS AGL	INV TOP METERS AGL	INV DT/DZ (DEG C)/100M	DT/DZ BELOW INV (DEG C)/100M
152.	343.	0.0	-0.30

UTAH UAUB ELEV 1585 METERS SOUNDING ID 5284

DATE 08/25/77 TIME 13:42MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

INV BASE METERS AGL	INV TOP METERS AGL	INV DT/DZ (DEG C)/100M	DT/DZ BELOW INV (DEG C)/100M
1011.	1049.	0.0	-0.80

UTAH UAUB ELEV 1585 METERS SOUNDING ID 5274

DATE 08/27/77 TIME 05:38MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

THERE ARE NO INVERSION BASES WITHIN 1500M OF THE SFC

LAYER BASE METERS AGL	LAYER TOP METERS AGL	DT/DZ (DEG C)/100M
0.	100.	-0.82
100.	250.	-0.79
250.	500.	-0.59
500.	750.	-0.53
750.	1000.	-0.46
1000.	1500.	-0.61

UTAH UAUB ELEV 1585 METERS SOUNDING ID 5272

DATE 08/27/77 TIME 13:50MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

THERE ARE NO INVERSION BASES WITHIN 1500M OF THE SFC

LAYER BASE METERS AGL	LAYER TOP METERS AGL	DT/DZ (DEG C)/100M
0.	100.	-1.24
100.	250.	-0.50
250.	500.	-0.37
500.	750.	-0.33
750.	1000.	-0.33
1000.	1500.	-0.51

UTAH UAUB ELEV 1585 METERS SOUNDING ID 5270

DATE 08/29/77 TIME 05:40MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

INV BASE METERS AGL	INV TOP METERS AGL	INV DT/DZ (DEG C)/100M	DT/DZ BELOW INV (DEG C)/100M
0.	381.	1.18	0.0

UTAH UAUB ELEV 1585 METERS SOUNDING ID 5280

UTAH UAUB ELEV 1585 METERS SOUNDING ID 5280

DATE 08/29/77 TIME 13:50MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

THERE ARE NO INVERSION BASES WITHIN 1500M OF THE SFC

LAYER BASE METERS AGL	LAYER TOP METERS AGL	DT/DZ (DEG C)/100M
0.	100.	-2.07
100.	250.	-0.60
250.	500.	-0.95
500.	750.	-0.56
750.	1000.	-0.43
1000.	1500.	-0.51

UTAH UAUB ELEV 1585 METERS SOUNDING ID 5273

DATE 08/31/77 TIME 05:02MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

INV BASE METERS AGL	INV TOP METERS AGL	INV DT/DZ (DEG C)/100M	DT/DZ BELOW INV (DEG C)/100M
0.	114.	2.01	0.0

UTAH UAUB ELEV 1585 METERS SOUNDING ID 5271

DATE 08/31/77 TIME 13:50MST ASCENT RATE 500 FPM DATA INTERVAL 15 SEC.

INV BASE METERS AGL	INV TOP METERS AGL	INV DT/DZ (DEG C)/100M	DT/DZ BELOW INV (DEG C)/100M
1002.	1304.	0.0	-0.79

MONTH: JUN JLY AUG YEAR: 1977 UTAH UAUB ELEV 1585 METERS

HOLZWORTH'S CLASSIFICATION SCHEME FOR INVERSIONS
MODIFIED TO SHOW TOTAL NUMBER INSTEAD OF PERCENT

THICKNESS (METERS)	SFC	1- 100	101- 250	251- 500	501- 750	751- 1000	1000- 1500	1501- 2000	2001- 2500	2501- 3000	TOTAL
		INVERSION BASE HEIGHT (M)									
1 - 100	3	3	4	3	2	1	3	0	0	0	19
101 - 250	10	0	2	2	2	1	1	0	0	0	18
251 - 500	20	0	0	0	1	0	2	0	0	0	23
501 - 750	5	0	0	0	0	0	0	0	0	0	5
751 - 1000	0	0	0	0	0	0	0	0	0	0	0
1001 - 1500	0	0	0	0	0	0	0	0	0	0	0
> 1500	0	0	0	0	0	0	0	0	0	0	0
INV TOTAL	38	3	6	5	5	2	6	0	0	0	65
DT/DZ 5		0	2	0	0	0	0	0	0	0	2
FROM INV 4		1	0	1	1	0	1	0	0	0	4
BASE 3		0	1	3	4	2	5	0	0	0	15
TO 2		0	3	1	0	0	0	0	0	0	4
SFC 1		2	0	0	0	0	0	0	0	0	2
NO INV TOT		13	13	13	13	13	13	DT/DZ (DEG C)/100M			
DT/DZ FOR 5		0	0	1	1	2	1	5= 0.00 TO -0.40			
SAME 4		0	0	2	3	5	6	4=-0.41 TO -0.80			
LAYERS 3		2	5	10	9	6	6	3=-0.81 TO -1.20			
AS INV 2		1	0	0	0	0	0	2=-1.21 TO -1.60			
BASE 1		10	0	0	0	0	0	1=<-1.60			

MONTH: JUN JLY AUG YEAR: 1977 UTAH UAUB SFC TO 500 METERS

NORMALIZED FREQUENCY DISTRIBUTION

DIRECTION	SPEED (METER/SEC) 0-3	4-6	7-10	11-16	17-21	GREATER THAN 21	AVERAGE SPEED	TOTAL
N	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NNE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ENE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ESE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WSW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
W	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WNW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NNW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AVG SPEED	0.0	0.0	0.0	0.0	0.0	0.0		0.0
TOTAL	0.0	0.0	0.0	0.0	0.0	0.0		0.0

RELATIVE FREQUENCY OF OCCURRENCE OF THE A STABILITY CLASS IS 0.0

RELATIVE FREQUENCY OF CALM 0.0

A TOTAL OF 6 SOUNDINGS FROM A SAMPLE OF 79 SOUNDINGS DID NOT HAVE 500 M AGL TEMP AND WIND DATA

MONTH: JUN JLY AUG YEAR: 1977 UTAH UAUB SFC TO 500 METERS

NORMALIZED FREQUENCY DISTRIBUTION

DIRECTION	SPEED (METER/SEC) 0-3	4-6	7-10	11-16	17-21	GREATER THAN 21	AVERAGE SPEED	TOTAL
N	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NNE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ENE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ESE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WSW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
W	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WNW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NNW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AVG SPEED	0.0	0.0	0.0	0.0	0.0	0.0		0.0
TOTAL	0.0	0.0	0.0	0.0	0.0	0.0		0.0

RELATIVE FREQUENCY OF OCCURRENCE OF THE B STABILITY CLASS IS 0.0

RELATIVE FREQUENCY OF CALM 0.0

A TOTAL OF 6 SOUNDINGS FROM A SAMPLE OF 79 SOUNDINGS DID NOT HAVE 500 M OF TEMP AND WIND DATA

MONTH: JUN JLY AUG YEAR: 1977 UTAH UAUB SFC TO 500 METERS

NORMALIZED FREQUENCY DISTRIBUTION

DIRECTION	SPEED (METER/SEC) 0-3	4-6	7-10	11-16	17-21	GREATER THAN 21	AVERAGE SPEED	TOTAL
N	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NNE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ENE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ESE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WSW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
W	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WNW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NNW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AVG SPEED	0.0	0.0	0.0	0.0	0.0	0.0		0.0
TOTAL	0.0	0.0	0.0	0.0	0.0	0.0		0.0

RELATIVE FREQUENCY OF OCCURRENCE OF THE C STABILITY CLASS IS 0.0

RELATIVE FREQUENCY OF CALM 0.0

A TOTAL OF 6 SOUNDINGS FROM A SAMPLE OF 79 SOUNDINGS DID NOT HAVE 500 M OF TEMP AND WIND DATA

MONTH: JUN JLY AUG YEAR: 1977 UTAH UAUB SFC TO 500 METERS

NORMALIZED FREQUENCY DISTRIBUTION

DIRECTION	SPEED (METER/SEC) 0-3	4-6	7-10	11-16	17-21	GREATER THAN 21	AVERAGE SPEED	TOTAL
N	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NNE	0.03	0.0	0.03	0.0	0.0	0.0	4.1	0.05
NE	0.05	0.03	0.0	0.0	0.0	0.0	2.6	0.08
ENE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ESE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SE	0.0	0.03	0.0	0.0	0.0	0.0	4.3	0.03
SSE	0.03	0.03	0.03	0.0	0.0	0.0	4.4	0.08
S	0.0	0.0	0.05	0.0	0.0	0.0	8.0	0.05
SSW	0.03	0.0	0.05	0.0	0.0	0.03	10.5	0.11
SW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WSW	0.03	0.08	0.0	0.0	0.0	0.0	4.5	0.11
W	0.0	0.05	0.03	0.0	0.0	0.0	5.9	0.08
WNW	0.08	0.27	0.0	0.0	0.0	0.0	4.0	0.35
NW	0.03	0.0	0.0	0.0	0.0	0.0	1.1	0.03
NNW	0.03	0.0	0.0	0.0	0.0	0.0	2.4	0.03
AVG SPEED	1.7	4.7	7.9	0.0	0.0	24.0		0.0
TOTAL	0.30	0.49	0.19	0.0	0.0	0.03		1.00

RELATIVE FREQUENCY OF OCCURRENCE OF THE D STABILITY CLASS IS 0.51

RELATIVE FREQUENCY OF CALM 0.0

A TOTAL OF 6 SOUNDINGS FROM A SAMPLE OF 79 SOUNDINGS DID NOT HAVE 500 M OF TEMP AND WIND DATA

MONTH: JUN JLY AUG YEAR: 1977 UTAH UAUB SFC TO 500 METERS

NORMALIZED FREQUENCY DISTRIBUTION

DIRECTION	SPEED (METER/SEC) 0-3	4-6	7-10	11-16	17-21	GREATER THAN 21	AVERAGE SPEED	TOTAL
N	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NNE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ENE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E	0.06	0.03	0.0	0.0	0.0	0.0	2.2	0.08
ESE	0.08	0.03	0.0	0.0	0.0	0.0	2.8	0.11
SE	0.06	0.0	0.0	0.0	0.0	0.0	1.1	0.06
SSE	0.25	0.03	0.0	0.0	0.0	0.0	2.3	0.28
S	0.06	0.08	0.0	0.0	0.0	0.0	3.1	0.14
SSW	0.08	0.11	0.0	0.0	0.0	0.0	3.1	0.19
SW	0.03	0.0	0.0	0.0	0.0	0.0	1.8	0.03
WSW	0.06	0.0	0.0	0.0	0.0	0.0	1.5	0.06
W	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WNW	0.03	0.0	0.0	0.0	0.0	0.0	2.9	0.03
NW	0.03	0.0	0.0	0.0	0.0	0.0	1.8	0.03
NNW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AVG SPEED	2.6	3.7	0.0	0.0	0.0	0.0		0.0
TOTAL	0.72	0.28	0.0	0.0	0.0	0.0		1.00

RELATIVE FREQUENCY OF OCCURRENCE OF THE F STABILITY CLASS IS 0.49

RELATIVE FREQUENCY OF CALM 0.0

A TOTAL OF 6 SOUNDINGS FROM A SAMPLE OF 79 SOUNDINGS DID NOT HAVE 500 M LEVEL TEMP AND WIND DATA

MONTH: JUN JLY AUG YEAR: 1977 UTAH UAUB SFC TO 500 METERS

NORMALIZED FREQUENCY DISTRIBUTION

DIRECTION	SPEED (METER/SEC) 0-3	4-6	7-10	11-16	17-21	GREATER THAN 21	AVERAGE SPEED	TOTAL
N	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NNE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ENE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ESE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WSW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
W	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WNW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NNW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AVG SPEED	0.0	0.0	0.0	0.0	0.0	0.0		0.0
TOTAL	0.0	0.0	0.0	0.0	0.0	0.0		0.0

RELATIVE FREQUENCY OF OCCURRENCE OF THE F STABILITY CLASS IS 0.0

RELATIVE FREQUENCY OF CALM 0.0

A TOTAL OF 6 SOUNDINGS FROM A SAMPLE OF 79 SOUNDINGS DID NOT HAVE SOME OF TEMP AND WIND DATA

MONTH: JUN JLY AUG YEAR: 1977 UTAH UAUB SFC TO 500 METERS

NORMALIZED FREQUENCY DISTRIBUTION

DIRECTION	SPEED (METER/SEC) 0-3	4-6	7-10	11-16	17-21	GREATER THAN 21	AVERAGE SPEED	TOTAL
N	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NNE	0.01	0.0	0.01	0.0	0.0	0.0	4.1	0.03
NE	0.03	0.01	0.0	0.0	0.0	0.0	2.6	0.04
ENE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E	0.03	0.01	0.0	0.0	0.0	0.0	2.2	0.04
ESE	0.04	0.01	0.0	0.0	0.0	0.0	2.8	0.05
SE	0.03	0.01	0.0	0.0	0.0	0.0	2.2	0.04
SSE	0.14	0.03	0.01	0.0	0.0	0.0	2.8	0.18
S	0.03	0.04	0.03	0.0	0.0	0.0	4.5	0.10
SSW	0.05	0.05	0.03	0.0	0.0	0.01	5.7	0.15
SW	0.01	0.0	0.0	0.0	0.0	0.0	1.8	0.01
WSW	0.04	0.04	0.0	0.0	0.0	0.0	3.5	0.08
W	0.0	0.03	0.01	0.0	0.0	0.0	5.9	0.04
WNW	0.05	0.14	0.0	0.0	0.0	0.0	3.9	0.19
NW	0.03	0.0	0.0	0.0	0.0	0.0	1.4	0.03
NNW	0.01	0.0	0.0	0.0	0.0	0.0	2.4	0.01
AVG SPEED	1.9	4.4	7.9	0.0	0.0	24.0		0.0
TOTAL	0.51	0.38	0.10	0.0	0.0	0.01		1.00

NORMALIZED FREQUENCY DISTRIBUTION INDEPENDENT OF STABILITY

RELATIVE FREQUENCY OF CALM 0.0

A TOTAL OF 6 SOUNDINGS FROM A SAMPLE OF 79 SOUNDINGS DID NOT HAVE 500 M OF TEMP AND WIND DATA

Form 1279–3
(June 1984)

BORROWER'S

DATE LOANED	BORROWER

USDI – BLM